Week -2

**Embrace your data analyst skills**

you possess five essential analytical skills that are valuable for a data analyst:

1. Curiosity: Your desire to learn and seek out new challenges demonstrates your curiosity.
2. Understanding Context: You have the ability to comprehend the context in which information exists or occurs, which is crucial for analysis.
3. Technical Mindset: You can break down complex tasks into smaller, logical steps, which is a key aspect of a technical mindset.
4. Data Design: You understand how to organize information effectively, even in everyday situations like managing contacts on your phone.
5. Data Strategy: You can manage people, processes, and tools to ensure efficient data analysis, as demonstrated by the example of mowing a lawn.

These skills will serve you well as you progress through the course and develop your data analysis abilities further. Embrace these skills and continue to practice and refine them as you move forward.

## Thinking about analytical thinking

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Analytical thinking involves problem identification and resolution using data in an organized manner.

 Five key aspects of analytical thinking include:

1. **Visualization**: Using graphical representations like graphs and maps to convey information effectively.
2. **Strategy**: Employing a strategic mindset to set goals and enhance data quality and usefulness.
3. **Problem-Orientation**: Focusing on identifying, describing, and solving problems throughout a project.
4. **Correlation**: Recognizing relationships between data but understanding that correlation doesn't imply causation.
5. **Big-Picture and Detail-Oriented Thinking**: Balancing the ability to see both the overall picture and specific details to generate new ideas and execute plans effectively.

* Analytical thinking involves using five key aspects: visualization, strategy, problem-orientation, correlation, and big-picture and detail-oriented thinking.
* Developing versatile thinking skills, including creative and critical thinking, is essential for data analysts.
* Data analysts ask questions like "What is the root cause of a problem?" and often use the Five Whys technique to uncover underlying issues.
* Gap analysis helps evaluate current processes compared to desired future states, identifying gaps that need to be addressed.
* Data analysts also consider what they may have overlooked before, aiming to fill in missing information or procedures for better decision-making.
* Effective analytical thinking and asking the right questions significantly impact business decision-making and succes

## Thinking about outcomes

* Data-driven decision-making involves using facts to guide business strategy and make informed choices.
* Data analysts use data to gain insights, verify assumptions, understand opportunities and challenges, support objectives, and plan effectively.
* Examples of data-driven decision-making include a dairy farmer using surveys to choose ice cream flavors and a company using employee feedback to discover preferred perks.
* The five essential analytical skills (curiosity, understanding context, technical mindset, data design, and data strategy) play a crucial role in data-driven decision-making.
* Curiosity and context help analysts see patterns, make predictions, research answers, and draw conclusions.
* A technical mindset involves seeking out facts, conducting analysis, and using insights for informed decisions.
* Data design involves organizing data logically to make it accessible and understandable.
* Data strategy encompasses people, processes, and tools, providing a high-level view of the path to achieve goals.
* Successful data-driven decision-making often requires collaboration and alignment among team members and technology.
* Google's HR department used data-driven decision-making to determine the value of having managers. They analyzed past performance reviews and employee surveys.
* Data revealed that teams with the best managers were happier, more productive, and more likely to want to keep working at Google.
* The data analysis helped identify the behaviors and qualities that make a great manager.
* An awards program and interviews with top and bottom quartile managers were used to gather additional data.
* This data-driven decision led to the recognition of the importance of managers in creating a positive company culture at Google.
* Data analysts in the nonprofit sector researched how journalists can make a more meaningful impact for nonprofits.
* They used data tracking to monitor story topics, clicks, web traffic, comments, shares, and more.
* Data analysis led to recommendations for journalists and nonprofits to motivate people to take action and support social causes.
* As a data analyst, you have endless possibilities to make a difference and solve real-world problems.
* Summarizing, you've learned about analytical skills, the key characteristics of data analysts, analytical thinking, tools and processes for problem-solving, and the power of data-driven decision-making.